## APPENDIX B: SOLAR SYSTEM EXPLORATION

### B.1 Overview

Solar System Research and Analysis supports investigations of all classes of objects in the Solar System, except the Earth and Sun, consistent with the strategy for Solar System Exploration embodied in *Mission to the Solar System: Exploration and Discovery, A Mission and Technology Roadmap* (available at http://sse.jpl.nasa.gov/roadmap/). A proposal submitted to any of the following programs in this Section B.2 must present, within its *Scientific/Technical/Management* Section, a clear description of a specific scientific problem, a description of how the attack on this problem will be carried out, and a discussion of the relevance of the proposed research to NASA's current and/or future programs. Proposals whose intent or purpose is to extend or directly supplement investigations already selected for approved space flight missions are not appropriate for this NRA, and investigators who are members of science teams of ongoing missions must delineate clearly between their mission responsibilities and any research efforts proposed through this NRA. Furthermore, proposals that include analysis of data from space flight missions must use publicly available data only (*e.g.* through the Planetary Data System); proposals that utilize data not yet released publicly will not be considered.

Solar System Research and Analysis is divided into four groups of related programs. The first group, entitled "Origin and Evolution of Solar System Bodies," relates primarily to the Solar System Exploration theme, although one of its program elements also relates strongly to the Astronomical Search for Origins theme in Astronomy and Physics (see Section A.1 in this NRA):

- *Cosmochemistry* (Appendix B.2) supports scientific investigations that are cosmochemical in nature and may involve laboratory studies of a variety of extraterrestrial materials (meteorites, cosmic dust, and lunar samples) or understanding of the geochemical nature of solar system bodies;
- *Planetary Geology and Geophysics* (Appendix B.3) supports scientific investigations of planetary surfaces and interiors, satellites (including the Moon), satellite and ring systems, and smaller Solar System bodies such as asteroids and comets;
- *Origins of Solar Systems* (Appendix B.4) solicits basic research proposals to conduct scientific investigations related to understanding the formation and early evolution of planetary systems and to provide the fundamental research and analysis necessary to detect and characterize other planetary systems;
- The *Mars Data Analysis* program (Appendix B.5) is intended to enhance the scientific return from the Mars Pathfinder (MPF), Mars Global Surveyor (MGS), and Mars Odyssey missions in the Mars Exploration Program;
- The *Sample Return Laboratory Instruments and Data Analysis* program (Appendix B.6) solicits investigations that seek to maximize the scientific return from samples provided by NASA's missions to the planets and comets through the development of advanced laboratory instruments and analytical techniques; and